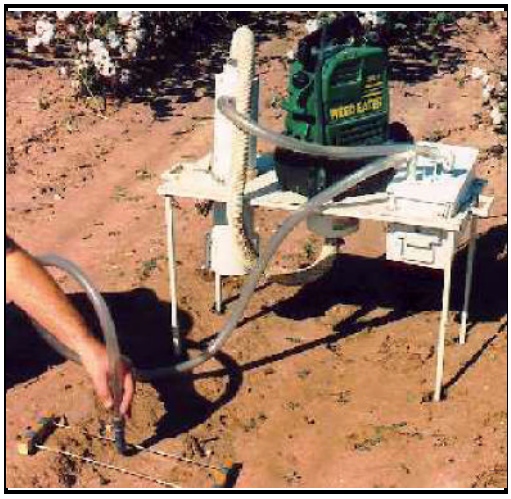
Loose Erodible Material Mass

Ted M. Zobeck
USDA/Agricultural Research Service
Lubbock, Texas 79401
tzobeck@mail.csrl.ars.usda.gov

Loose erodible material (LEM) is defined as loose, unconsolidated soil material less than 0.84 mm equivalent diameter (Chepil, 1951) exposed on the soil surface. Loose erodible material is measured only when a crust is present. When a crust is not present, as in newly tilled fields, the erodibility is better defined by the DASD. We measure LEM using a vacuum system designed for this purpose as shown below (Zobeck, 1989). Representative areas within a dry field are vacuumed, and the samples are sieved and weighed. LEM mass is reported on an area basis. The cover fraction of LEM is also measured using the line-transect method.

Fast-Vac system to measure loose erodible material.



References

Chepil, W. S. 1951. Properties of soil which influence wind erosion: IV. State of aggregate status. *Soil Sci. 72:387-401*.

Zobeck, T. M. 1989. Fast-Vac - A vacuum system to rapidly sample loose granular material. *Trans. ASAE 32:1316-1318*.